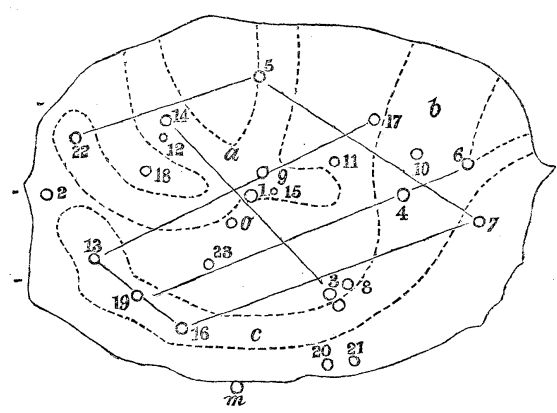


In most cases the degree of visibility is underrated, as it is probable that in another series by the same observers many of the smaller spots may be *looked* for and *seen* under circumstances which, in earlier observations, occasioned them to have been overlooked, unless specially sought for. The spots remaining in the same condition, affected only by variations in the Earth's atmosphere, the probability is that successive series of about the same number of observations by the same observers will give similar degrees of visibility. It may be remarked that on no occasion have all the spots been seen simultaneously ; the greatest number recorded in one watch is thirteen, and these were not all seen at once.



The dotted lines in the diagram are intended to represent the probable boundaries of the lighter markings on the floor of *Plato*, which are by no means of a sharp or definite character, but ill-defined and passing gradually into the darker hue. Although there is some reason to conclude that they are really permanent, yet they are seldom seen alike. The observations of these delicate markings are not at present sufficiently numerous to allow of an examination into the circumstances that affect their visibility. In conclusion, I would remark that this communication is intended rather as a contribution towards elucidating a confessedly difficult branch of Selenography, than establishing the order of visibility of the spots above named, further observations being required for this object.

Lunar Eclipse of 23rd and 24th July, 1869. By John Tebbutt, Jun.

The lunar eclipse of the 23-24th July was observed here as follows :—

						Windsor M.T.			
						d	h	m	s
First contact with shadow	..	..	..	..	..	23	10	43	35
Last	„	„	..	..	..	13	29	28	

The contacts were observed with a power of about 90 on my $3\frac{1}{4}$ -inch refractor, but the results are by no means satisfactory, owing to the irregular and ill-defined character of the shadow.

The colour of the shadow was very dark iron grey; the red tint usually seen in total eclipses was not noticed. Even with a power of about 30 and the illuminated disk excluded from the field of view, the details on the obscured portion of the surface were perceived only with the greatest difficulty. The eclipsed limb was, however, pretty distinct, but it appeared to be an arc of a smaller circle than the illuminated limb, the bending inwards of the limb at the cusps being very perceptible.

Windsor, New South Wales, August 11, 1869.

Comet 1869.

Discovered October 11, at Vienna, by M. Tempel.

Mr. Hind, in a letter dated Twickenham, Nov. 17, addressed to the President, writes, that Dr. Winnecke having sent him an observation on October 18, which fits in very well with two in the *Astronomische Nachrichten*, he has calculated the following approximation (apparently a very fair one) to the elements of the orbit:—

Perihelion Passage	1869, Oct. 8 ^h 44 ^m 21 ^s G.M.T.		
Longitude of Perihelion		124° 41' 1"	} Apparent Equinox.
„ Ascending Node		311° 24' 4"	
Inclination		68° 48' 8"	
Log. perihelion distance		0.0895	

Motion retrograde.

He remarks that these elements do not resemble those of any comet previously computed. They appeared in "*Nature*," No. II.

Occultations of Stars, and Eclipse of Satellite of Jupiter, observed at Leyton. By C. G. Talmage.

1869, July 21.—Occultation, disappearance of 33 *Sagittarii*; power 70 on 10-inch refractor. G.M.T. 12^h 3^m 23^s.92.

Good, time exact, cloudy at reappearance.

1869, August 2.—Occultation, reappearance of α *Tauri*; power 70 on 10-inch. G.M.T. 13^h 13^m 48^s.23.

Came out instantaneously, no hanging on limb. Moon hid by a tree at disappearance.

1869, October 11.—Occultation, reappearance of 31 *Sagittarii* on Moon's bright limb; power 70 on 10-inch. G.M.T. 6^h 7^m 55^s.93.